



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/877,585	06/08/2001	William Colin Basford		1568

7590 05/27/2003

WILLIAM COLIN BAFORD  
14 HEARTWOOD CIRCLE  
NEWMARKET, NH 03857

[REDACTED] EXAMINER

PATEL, KIRAN B

ART UNIT	PAPER NUMBER
3612	

DATE MAILED: 05/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/877,585	BASFORD, WILLIAM COLIN 
	Examiner	Art Unit
	Kiran B. Patel	3612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address.  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 17 March 2003.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-4, 11, 12 and 14-35 is/are pending in the application.
- 4a) Of the above claim(s) 1-4, 11, 12, 14-25 and 30 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 26-29, 31-35 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a)  The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Election/Restriction*

1. Applicant's election without traverse of Species B Figs 8-13, claims 5-18, in Paper No. 6 is acknowledged.

Claims 1-4 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species, there being no allowable generic or linking claim.

Further, Applicant elected only Fig 8 and withdrew the election of Fig 9-13 because Fig 9-13 contains different embodiments and elected claims 5-19 for prosecution. Applicant was informed that claims, which do not read on Fig 8, will be withdrawn from further consideration and rejoined at the time of allowance of this application.

Further, Claims 11-12, 14-18 were withdrawn by the Examiner from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species.

Further, Claims 19-25, 30 were withdrawn by the Examiner from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention classified in Class 29 as was discussed with Mr. Jones.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 26-29, 31-35, as best understood, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 26, lines 2-3, "a low pressure wake having an outer wake perimeter"; lines 8-10 "means positioning side-by-side vortex generators in a linear array ahead of the two side, top and bottom trailing edges of said bluff body for generating

counter rotating stream-wise vortices; and lines 15-17 "rear edges on said boattail plates sized to intercept the separated shear surfaces of said fluid layer at the outer perimeter of the low pressure wake thereby providing maximum fluid-dynamic base drag reduction for said body" fails to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These are only representative examples where applicant has failed to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Therefore, applicant is requested to review all the claims making sure that claimed limitations have support in the specification and elected figures.

It is not clear between claims 26 and claim 27 whether applicant is claiming three or four boattails.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 26-29, 31-35, as best understood, are rejected under 35

U.S.C. 103(a) as being unpatentable over Switlik '059 in view of Wheeler '837.

Regarding Claims 26-29, 31-35, as best understood, Switlik '059 discloses in Fig 1-17 the invention as claimed to include a bluff body 10, having a substantially flat base surface, hinged boattail plates 28, 32, 36, 94, a land vehicle, a rear opening truck trailer body; and swinging rear doors 20, 22.

However, Switlik '059 does not disclose a plurality of vortex generators.

Wheeler '837 discloses in Fig 4 a plurality of V shaped vortex generators 40 having an open end and a pointed end.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device, as disclosed by Switlik '059, to include a plurality of vortex generators, as disclosed by Wheeler '837, to achieve the desire level of base drag reduction for the bluff body.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.

See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Applicant is requested to review and amend the specification and/or claims, without adding any new matter, as necessary to remove the indefinite language from the claims and particularly point out and distinctly claim the subject matter which applicant regards as the invention. This will allow the Examiner to understand the claims and complete the required search for the claimed limitations and prepare an Office Action for the Applicant.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kiran B. Patel (phone # 703-305-0254/ fax # 703-746-3522). The examiner can normally be reached M-F 8:00-5:00.

The fax numbers for the organization where this application or proceeding is assigned are 703-872-9327 for regular communications and 703-872-9326 for After Final communications.

*Kiran B. Patel*  
Kiran B. Patel  
Primary Examiner  
Art Unit 3612  
May 22, 2003